

REMARKS

Claims 1-12 are now pending in the application. Claims 2 and 8 have been currently amended. Pending claims 1 and 3-12 stand rejected under 35 U.S.C. § 102 (b). Also, pending claims 1-12 stand rejected under 35 U.S.C. § 102 (e). Moreover, pending claims 2 and 8 stand rejected under 35 U.S.C. § 103 (a). The forgoing amendments and following remarks are considered by Applicants to overcome each rejection raised by the Examiner and to place the application in condition for allowance. An early Notice of Allowance is therefore requested.

I. Rejection Of Pending Claims 2 and 8 Under 35 U.S.C. § 112, Second Paragraph

The Examiner objects to claims 2 and 8 as being indefinite for failing to particularly point out and distinctly claim the subject matter in which applicant regards as the invention. More particularly, claims 2 and 8 both recite the phrase “self-dispersing type of carbon black” in which the Examiner argues that the scope of the claims is confusing because it is not clear what is meant by the word “type.”

To expedite prosecution of the application, Applicants have amended claims 2 and 8 to overcome the cited objection. Accordingly, Applicants request the withdrawal of the rejection of claim 4 and 8 under 35 U.S.C. 112.

II. Rejection Of Pending Claims 1-12 Under 35 U.S.C. § 102

Claims 1, 3-7 and 9-12 stand as rejected under 35 U.S.C. § 102(b) as being anticipated by Fujioka, U.S. Patent No. 5,667,569, issued September 16, 1997 (“Fujioka”). The Examiner also rejected claims 1-12 under 35 U.S.C. § 102 (e) as being anticipated by Koga et al., U.S. Patent Application Serial No. 10/097,411. Claims 7-12 stand as rejected under 35 U.S.C. § 102 (b) as being anticipated by Kato, U.S. Patent No. 6,440,203 issued

Serial No.: 10/668,574

August 27, 2002 ("Kato"). Claims 7 and 9-12 are rejected under 35 U.S.C. § 102 (e) as being anticipated by Segawa et al., U.S. Patent Application Serial No. 10/366,537. Claims 7-12 under 35 U.S.C. § 102 (e) as being anticipated by Valentini et al., U.S. Patent Application Serial No. 10/843,133. Claims 7-8, 10 and 12 stand as rejected under 35 U.S.C. § 102 (b) as being anticipated by Yatake, U.S. Patent No. 5,746,818 issued May 5, 1998 ("Yatake"). These rejections are traversed and believed overcome in view of the following discussion.

A. Relevant Law

"A claim is anticipated if each and every limitation is found either expressly or inherently in a single prior art reference." *Bristol-Myers Squibb v. Ben Venue*, 246 F.3d 1368, 1374 (Fed. Cir. 2001). Identity of invention requires that a prior reference disclose to one of ordinary skill in the art all elements and limitations of the patent claim. *Scripps Clinic v. Genentech*, 927 F.2d 1565, 1576 (Fed. Cir. 1991). Absence from the reference of any claimed element negates anticipation. *Kloster Speedsteel AB v. Crucible, Inc.*, 230 USPQ 81 (Fed. Cir. 1986).

B. Summary of Cited References

Fujioka teaches a water-based ink comprising at least one coloring agents, at least one polyvalent alcohol in an amount ranging from 5-50% by weight based on the weight of the ink; at least one polyvalent alcohol monoalkyl ether in an amount ranging from 5-15% by weight based on the weight of the ink and water. See Summary of the Invention.

Koga discloses a water based ink for ink-jet recording containing water-soluble dyes or pigments as coloring agents, polyvalent alcohol monoalkyl ether, polyvalent alcohol and water. Koga further discloses that the polyvalent alcohol monoalkyl ether contained in the

water-based ink is preferably selected from triethylene glycol monoalkyl ether and tripropylene glycol monoalkyl ether. See Summary of the Invention.

Kato discloses an ink composition containing a first colorant, a second colorant, a penetrating agent, water and a water-soluble organic solvent. See Summary of the Invention.

Segawa discloses an ink composition that comprises at least a pigment, a compound having water, a water-soluble organic solvent and a sulfone group containing polymer.

Valentini discloses an ink for inkjet printing, comprising a self-dispersing pigment colorant and certain soluble polymers which enhance print quality without compromising jetting performance.

Yatake discloses an ink comprising a pigment dispersible and/or soluble in water without the aid of any dispersant and glycol ether selected from the group consisting of diethylene glycol mono-n-butyl ether, triethylene glycol mono-n-butyl ether, propylene glycol mono-n-butyl ether, and dipropylene glycol mono-n-butyl ether.

C. Argument

Claim 1 recites an ink for ink-jet recording comprising tripropylene glycol normal butyl ether, an acrylic polymer, a water-insoluble coloring agent, and water.

It is respectfully submitted that the references Fujioka and Kogo fail to teach or suggest an ink comprising tripropylene glycol normal butyl ether, an acrylic polymer, a water-insoluble coloring agent, and water. Although Fujioka and Kogo discloses an acrylic polymer or salt thereof as an example of polymer dispersing agent containing in the ink, and tripropylene glycol normal butyl ether as an example of permeating agent contained in the ink, the acrylic polymer and the tripropylene glycol normal butyl ether are indiscriminately recited as part of numerous components. In addition, Fujioka and Kogo do not teach or

suggest the use of the acrylic polymer in combination with the tripropylene glycol normal butyl ether as defined in claim 1.

Accordingly, Fujioka and Kogo fail to teach or disclose each and every limitation of independent claim 1. Therefore, neither Fujioka nor Kogo anticipate claim 1. Claims 2-12 by virtue of their dependency from claims 1 and 7, are similarly considered by Applicants to patentably define themselves and are novel over Fujioka and Kogo.

Independent claim 7 recites an ink for ink-jet recording comprising dipropylene glycol normal propyl ether, an acrylic polymer, a water-insoluble coloring agent, and water. It is submitted that Fujioka, Koga et al, Kato, Segawa et al, Valentini et al and Yatake discloses an acrylic polymer or a salt thereof, as an example of polymer dispersing agent or viscosity modifier (Yatake, col. Line 35), and dipropylene glycol normal propyl ether, as an example of permeating agent or water soluble organic solvent (Yatake) contained in the ink. However, in these references, the acrylic polymer and dipropylene glycol normal propyl ether are indiscriminately recited as a part of numerous compounds. In addition, none of the references specifically teach or suggest using the acrylic polymer in specific combination with dipropylene glycol normal propyl ether as defined in claim 7 of the present application.

Accordingly, even though these references recite the numerous polymer dispersing agents and the numerous permeating agents, there would be no suggestion in the references for the one of ordinary skill in the art to use the acrylic polymer in combination with the tripropylene glycol normal propyl ether. This argument can be pursued with reference to Comparative Examples of the present application as summarized follows.

Comparative Example 1	Tripropylene glycol normal butyl ether was singly used.
Comparative Example 2	Polyacrylic acid sodium salt was singly used.
Comparative Example 3	Tripropylene glycol methyl ether and Polyacrylic acid sodium salt were used.
Comparative Example 4	Diethylene glycol diethyl ether and Polyacrylic acid sodium salt were used.

Comparative Example 5	Triethylene glycol dimethyl ether and Polyacrylic acid sodium salt were used.
Comparative Example 6	Triethylene glycol dimethyl ether and salt of copolymer of acrylic acid/sulfonic acid monomer were used.

It should be noted that Koga recites the tripropylene glycol normal butyl ether and the tripropylene glycol methyl ether (in paragraph [0042]) used in the above Comparative Examples, together with tripropylene glycol normal butyl ether ([0043]) and dipropylene glycol normal propyl ether ([0042]). Also, Fujioka recites, in column 4, examples of polyvalent alcohol monoalkyl ether including the tripropylene glycol normal butyl ether and the tripropylene glycol methyl ether used in the above Comparative Example, together with the tripropylene glycol normal butyl ether and the dipropylene glycol normal propyl ether used in the present application. However, the cited references fail to teach the combination provided in the claimed invention.

The inventors of the present application discovered, among these numerous combinations, the combination of the acrylic polymer and the tripropylene glycol normal butyl ether as defined in claim 1, and the combination of the acrylic polymer and the dipropylene glycol normal propyl ether as defined in claim 7, are excellent in all of the recovery performance upon introduction, the straight travel stability, the fixation performance and the drying performance as indicated in Table 12 of the present application. Therefore, since the present application has provides such unexpected results, the present application is not anticipated by any of the cited references. Thus, the cited references fail to provide the composition of the ink in a combination as provided in the claimed invention. For these reasons, reconsideration and withdrawal of the rejection of claims 1-12 under 35 U.S.C. §102 rejections are respectfully requested.

III. Rejection Of Pending Claims 2 and 8 Under 35 U.S.C. § 103

Claims 2 and 8 stand as rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka, U.S. Patent No. 5,667,569, issued September 16, 1997 ("Fujioka ") in view of Ito et al., U.S. Patent No. 6,488,753, issued December 3, 2002 ("Ito "). This rejection is traversed and believed overcome in view of the following discussion.

A. Relevant Law

An Examiner may find each claimed element of an invention in the prior art references but it is not sufficient to establish obviousness of the invention. *In re Rouffet*, 47 USPQ2d 1453 (Fed. Cir. 1998). A determination of obviousness must involve more than an indiscriminate combination of the prior art; there must be some motivation, suggestion, or teaching of the desirability of combining or modifying the references to arrive at the claimed method. *In re Dance*, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998). Further, rejecting claims solely by finding prior art corollaries for the claimed elements would permit an Examiner to use the claimed inventions itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention is "an inappropriate process by which to determine patentability." *Sensonics, Inc. v. Aerosonic Corp.*, 38 USPQ2d 1551 (Fed. Cir. 1996).

B. Summary of Cited References

Fujioka is discussed above.

Ito discloses an aqueous pigment dispersion comprising at least water and a surface-modified carbon black, the surface-modified carbon black being dispersible and/or dissolvable in water without any dispersant and having a hydrophilic functional group

content/specific surface area value of 5 to 30 $\mu\text{mol}/\text{m}^2$. Ito further discloses water-base ink composition comprising at least the above aqueous pigment dispersion.

C. Argument

It is submitted that Ito fails to cure the deficiencies of Fujioka. Specifically, the cited references fail to teach or suggest the features recited in claims 1 and 7. Claims 2 and 8 are dependent upon claims 1 and 7. Applicants respectfully submit that for at least the reasons mentioned above, claims 2 and 8 recite subject matter that is neither taught nor suggested by the applied references. Accordingly, Applicants request the withdrawal of the rejection of claims 2 and 8 under 35 U.S.C. 103(a).

IV. Conclusion

For the reasons presented above, claims 1-12, all the claims pending in the application, are believed by Applicants to define patentable subject matter and should be passed to issue at the earliest possible time. A Notice of Allowance is requested.

Respectfully submitted,

Eugene LeDonne
Reg. No. 35,930

REED SMITH LLP
599 Lexington Avenue
New York, NY 10022
(P) 212-521-5402

Attorney for Applicant